

REMARKS

Claim 29 has been amended. Claims 1, 4-21, and 25-29 are currently pending.

On page 3 of the Office Action, the Examiner alleged that claims 4, 5, 7, and 8 recite "limitations that are already recited in currently amended claim 1. . . ." Applicants respectfully submit that claim 4 properly further limits claim 1. In particular, for example, claim 4 recites the additional feature wherein "said optical demultiplexer and said optical multiplexor being arranged along said closed loop."

Therefore, Applicants respectfully request withdrawal of the objection to claims 4, 5, 6, 7, 8, and 9.

Applicants have amended claim 29 to capitalize the first word "an" of the claim. Applicants have also amended claim 29 to replace the acronym "WEM" with "WDM."

On page 4 of the Office Action, claim 6 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

In particular, the Examiner alleged that claim 6 recites a feature that is contradicted by claim 1. Applicants respectfully submit that claim 1 indicates that the transmission band of the optical demultiplexer per wavelength channel has a central wavelength substantially coinciding with a first wavelength shorter than the central wavelength of each wavelength channel of the WDM signal light. Claim 6 indicates that the transmission band of the optical demultiplexer has a central wavelength substantially coinciding with the central wavelength of each wavelength channel of the WDM signal light. As claim 6 does not recite information regarding the length of the wavelength, the claim does not contradict claim 1, in which the length of the wavelength is recited. Therefore, claims 1 and 6 are consistent. Hence, withdrawal of the rejection is respectfully requested.

On page 5, claims 1, 4-8, 10-21, 25, 27, and 28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Japanese patent no. 11-289296 A (English-language equivalent to U.S. Pat. No. 6,351,323 B1) (hereinafter Onaka) in view of U.S. Pat. No. 4,945,531 A (hereinafter Suzuki) and U.S. Pat. No. 6,594,410 B2 (hereinafter Kersey).

Onaka is directed to providing an optical wave-length multiplexed network and a device which are allegedly reliable using an AOTF. According to Onaka, the optical transmission apparatus according to the present invention in a WDM communications system branches and adds an optical signal having an optional wavelength and includes at least two variable

wavelength selection filters.

Suzuki is directed to an optical wavelength-division multiplex transmission system having an optical filter for filtering spontaneous emission noise from an optically multiplexed signal which has been amplified by an optical amplifier. According to Suzuki, the optical filter is for transmitting passbands with center wavelengths corresponding to those of the wavelengths of the optical signals to be transmitted by the optical wavelength-division wavelength multiplex transmission system.

Kersey is directed to a tunable optical filter that includes a pair of tunable Bragg grating units optically coupled to respective ports of a 4-port circulator for filtering a selected wavelength band or channel of light from a DWDM input light. Each band or channel of light from a DWDM input light. Each grating unit includes an array of Bragg gratings written or embedded within a respective tunable optical element to provide a tunable optical filter that functions over a wide spectral range. According to Kersey, the range is greater than the tunable range off each grating element.

According to the present invention, in at least one embodiment, the transmission band of the optical demultiplexer, per wavelength channel, has a central wavelength substantially coinciding with a wavelength shorter than the central wavelength of each wavelength channel of the WDM signal light. The transmission band of the optical multiplexer, per wavelength channel has a central wavelength substantially coinciding with a wavelength longer than the central wavelength of each wavelength channel of the WDM signal light. See Specification of the present invention, page 26, lines 11-22. See also FIG. 10.

Applicants respectfully submit that independent claims 1, 15, 20, 27, and 29 are patentable over the references, as none of the references, taken alone or in combination, teach or suggest a, "transmission band of said optical demultiplexer per wavelength channel has a central wavelength substantially coinciding with a first wavelength shorter than the central wavelength of each wavelength channel of said WDM signal light," for example, as recited in independent claim 1 (independent claims 15, 20, 27, and 29 recite language similar to that of claim 1).

On page 6 of the Office Action, the Examiner acknowledges that Onaka does not disclose a wavelength selecting filter comprising a demultiplexer and a multiplexer, as indicated by the language of the claims of the present invention. The Examiner, alleges, however, that Suzuki teaches a wavelength selecting filter including an optical demultiplexer and optical multiplexer.

Applicants respectfully submit that in contrast to the present invention, Suzuki specifically states that the four optical signals have wavelengths that are substantially *equal* to the wavelengths from the WDM signal, respectively. See Suzuki, column 2, lines 48-54. Therefore, Suzuki teaches away from the feature of the present invention, according to which, the optical demultiplexer, per wavelength channel, has a central wavelength substantially coinciding with a first wavelength *shorter* than the central wavelength of each wavelength channel of the WDM signal light.

As Kersey does not provide information regarding wavelength characteristics, Applicants respectfully submit that Kersey does not add any relevant information to Suzuki. Therefore, claims 1, 15, 20, 27, and 29 of the present invention are patentable over the references, as none of the references, taken alone or in combination, teach or suggest the above-identified feature of the claims of the present invention.

As dependent claims 4-8, 10-19, 21, 25, and 28 depend from respective independent claims, the dependent claims are patentable over the references for at least the reasons presented above for the independent claims.

As U.S. Patent No. 6,538,782 B1 (which the Examiner indicates is an equivalent of Japanese Patent No. 11-218790 A) is silent regarding the above-identified feature of the present invention, dependent claims 9 and 26, via their respective independent claims, are patentable over the references.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

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If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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